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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,322	04/06/2006	Marc Chilla	FAI225USPCT	3634
23906 7590 12/09/2008 E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1122B 4417 LANCASTER PIKE WILMINGTON, DE 19805				
			EXAMINER FLETCHER III, WILLIAM P	
			ART UNIT 1792	PAPER NUMBER
			NOTIFICATION DATE 12/09/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-Legal.PRC@usa.dupont.com

Office Action Summary

Application No.

10/575,322

Applicant(s)

CHILLA ET AL.

Examiner

William P. Fletcher III

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-4 is/are rejected.
7) ☒ Claim(s) 5-12 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Specification

1. The use of numerous trademarks has been noted in this application. Trademarks should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

2. Claims 5-12 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim may depend from another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 5-12 have not been further treated on the merits.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The term "light" in claims 1 and 2 is a relative term which renders the claim indefinite. The term "light" is not defined by the claim, the specification does not

provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Applicant's specification discloses the following in relation to the claimed "light metallic color shades":

The invention relates to a process for the production of multi-layer coatings in light metallic color shades (bright metallic hues) that are well-known in automotive coating. Light metallic color shades exhibit a so-called "brightness flop" and, dependent on the composition of the pigment content, they may exhibit a color flop as well. "Flop," means the behavior to change brightness or color dependent on the observation angle. (1:5-10).

From this it is clear that "light metallic color shades" exhibit *properties* such as brightness and color flop, but this disclosure does not provide a *definition* of the term "light." For example, applicant discloses preparation of beige and silver metallic coatings (page 14), from which it is clear that black coatings, for example, are excluded. But what about blue coatings? A midnight blue coating probably would not qualify as a "light metallic color shade," but what about the continuum of blue shades between midnight blue and, say, sky blue? Which ones are included and which ones are excluded? Where is the line drawn? How is that dividing line determined? Applicant's specification provides no way of answering these questions. The same situation exists for red, green, purple, etc., coatings. Consequently, it is impossible to determine the metes and bounds of the subject matter encompassed by the term "light metallic color shades."

Claims 3 and 4 are similarly indefinite by virtue of their incorporation of this subject matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schlaak (US 5,976,343 A) in view of Kiehl et al. (*Progress in Organic Coatings* 37 (1999) 179-183) and Falcoff et al. (US 4,403,866 A).

Schlaak teaches a process for the production of a multi-layer coating on a substrate comprising the successive steps of: applying a base coat layer to a pre-coated (EDC primer) substrate; applying a clear coat layer onto the base coat layer; and jointly curing the base coat and clear coat layers (abstract).

With specific respect to independent claim 1, Schlaak teaches that the base coat layer includes a layer, 7-15 microns thick, of a water-borne metallic base coat that is

'unmodified' within the context of applicant's disclosure (see 17:6-18:12 of the specification) because it does not contain an admixture component (abstract and 3:40-7:65). Schlaak's range of 7-15 microns overlaps applicant's claimed range of 5-10 microns. In the case where a claimed range overlaps a range disclosed by the prior art, a *prima facie* case of obviousness exists (MPEP 2144.05(I)).

With specific respect to independent claim 2, Schlaak teaches that the base coat layer includes two layers, together totaling 17-45 microns thick (abstract). The first base coat layer is a water-borne metallic base coat that is 'modified' within the context of applicant's disclosure (see 17:6-18:12 of the specification) because it contains an admixture component (abstract and 3:40-7:65). The second base coat layer, as noted above, is a water-borne metallic base coat that is 'unmodified' within the context of applicant's disclosure (see 17:6-18:12 of the specification) because it does not contain an admixture component (abstract and 3:40-7:65). Schlaak's range of 17-45 microns overlaps applicant's claimed range of 10-30 microns. In the case where a claimed range overlaps a range disclosed by the prior art, a *prima facie* case of obviousness exists (MPEP 2144.05(I)).

Schlaak further discloses that the base coat layer(s) has/have a ratio, by weight, of pigment content to solids content of 0.03:1 to 3:1, preferably 0.06:1 to 0.6:1 (6:25-35), which encompasses applicant's claimed range of 0.3:1 to 0.45:1. In the case where a claimed range overlaps or lies within a range disclosed by the prior art, a *prima facie* case of obviousness exists (MPEP 2144.05(I)). The base coat layer(s) may contain 'any conventional pigments,' with aluminum metal pigments explicitly disclosed (5:30-

42). The claims recite '0 to 40% by weight of at least one pigment different from aluminum pigments,' which reads on no pigment other than the aluminum pigment. Nevertheless, Schlaak teaches that pigments include 'inorganic and/or organic coloured pigments and/or effect pigments and optionally fillers' (5:30-42, emphasis added). It is the examiner's position that this teaching by Schlaak is inclusive of at least one pigment different from aluminum pigments. Lastly, Schlaak does not explicitly teach that the multi-layer coatings are in 'light metallic color shades,' as claimed (see above). Nevertheless, it is the examiner's position that Schlaak's disclosure of 'any conventional pigments' is inclusive of multi-layer coatings in any shade, including those that are considered 'light metallic color shades.'

Schlaak does not teach: (i) that the pigment content consists of 60 to 100% by weight of at least one non-leafing aluminum pigment with a platelet thickness of over 100 to 500 nm; (ii) that the coating has the claimed brightness L^* ; and (iii) that at least 50% by weight of the non-leafing aluminum pigment(s) is/are passivated by chromating and/or coated with a silicon-oxygen network.

With respect to (i) and (iii), Kiehl teaches aluminum pigments encapsulated (i.e., coated) with a silicon-oxygen network. Encapsulating the aluminum pigments advantageously reduces/eliminates reaction with and oxidation (i.e., corrosion) by water, making such encapsulated pigments better suited for incorporation and long-term stability in water-based coatings (abstract and section 2). Kiehl also teaches that such pigments may also be chromated for the same purpose (abstract and section 2). Although Kiehl does not explicitly refer to the pigment as a 'non-leafing aluminum

pigment,' it is the examiner's position that Kiehl's pigment is, indeed, a non-leafing aluminum pigment within the context of applicant's disclosure (see 9:27-10:26 of the specification).

It would have been obvious to one of ordinary skill in the art to modify the process of Schlaak so as to utilize, as the aluminum pigment in the water-based base coat layer, chromated and/or silicon-oxygen network-encapsulated aluminum pigments. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of advantageously imparting corrosion-resistance to the particles, thereby improving their long-term stability in the water-based coating. It would have been further obvious to one of ordinary skill to utilize the chromated and/or encapsulated aluminum pigments as 100% (i.e., at least 50%) of the aluminum pigment in the base coat layer, as doing so would maximize the corrosion resistance and long-term stability of the coating.

As noted above, the disclosure of Schlaak is inclusive of the aluminum pigment's being the only pigment present (i.e., 100% by weight). Nevertheless, it is the examiner's position that the concentration of a pigment in a coating composition is a result-effective variable. The pigment must be present in an amount sufficient to achieve the desired pigmentation or effect, but not so much that it adversely effects coating characteristics such as viscosity, flowability, uniformity, etc. Consequently, absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed concentration of aluminum pigment, it would have been further obvious to one of ordinary skill in the art to modify the process of Schlaak in view of Kiehl so as to

optimize the pigment concentration by routine experimentation (MPEP 2144.05(II)). The examiner further notes that generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical (MPEP 2144.05(II)).

While none of the cited references explicitly state that the aluminum pigment has a platelet thickness of over 100 (i.e., greater-than 100) to 500 nm, it is the examiner's position that platelet thickness is a result-effective variable as well. The pigment must be thick enough to allow for the proper orientation in the coating to give the desired pigmentation effect, but not so thick as to adversely effect coating characteristics and pigmentation effects. Consequently, absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed platelet thickness, it would have been further obvious to one of ordinary skill in the art to modify the process of Schlaak in view of Kiehl so as to optimize the pigment platelet thickness by routine experimentation (MPEP 2144.05(II)).

With respect to (ii), Falcoff teaches that, in a pigmented coating composition (i.e., paint), any desired L* value may be achieved by selecting the proper amount of colorants, binder, and optional ingredients according to well-known principles (2:48-3:40 and 5:30-35). This disclosure clearly indicates that L* is a result-effective variable, the optimization of which is well-within the level of skill of one of ordinary skill in the art. Consequently, absent clear and convincing evidence of unexpected results demonstrating the criticality of the claimed L* value, it would have been further obvious to one of ordinary skill in the art to modify the process of Schlaak in view of Kiehl so as

to optimize the L* by routine experimentation according to known principles (MPEP 2144.05(II)).

With respect to claim 3, Schlaak teaches that the modified base coat layer is applied in a thickness of 10-30 microns and that the unmodified base coat layer is applied in a thickness of 7-15 microns (abstract). Both of these ranges overlap the claimed ranges of 5-20 microns and 2-10 microns, respectively. In the case where a claimed range overlaps a range disclosed by the prior art, a *prima facie* case of obviousness exists (MPEP 2144.05(I)).

With respect to claim 4, Schlaak teaches that the modified base coat layer may be applied by electrostatic high-speed rotary spraying and that the unmodified base coat layer may be applied by compressed air spraying (i.e., pneumatically spray-applied) (9:7-29).

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-4 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2-4 of copending Application No. 10/950,616. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter of the instant claims fully encompasses that of the co-pending claims such that, in practicing the process of the co-pending claims, one necessarily practices the process of the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Sunday, 5:00 AM - 12:00 PM and Monday through Friday, 5:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Phillip Fletcher III/
Primary Examiner, Art Unit 1792

30 November 2008